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The Architecture of City Identities: A Multimodal Study of Barcelona and Boston

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Abstract (N=95/100): City identity is a distinct form of collective identity based on the perceived uniqueness and meanings of place rather than group category and membership. A city's identity is constructed over time through architecture, which involves three sign systems—material, visual and rhetorical—and multiple institutional actors to communicate who the city is and its distinctiveness. We compare Barcelona and Boston to examine the identity and meaning created and communicated by different groups of professionals, such as architects, city planners, international guide book writers and local cultural critics, who perform semiotic work of constructing city identity.

Key words (N=6): city identity, architecture, material order, visual style, rhetoric, multimodality

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Forthcoming in Research in the Sociology of Organizations

Constructing City Identity through Architecture: A Multimodal Approach

[A]rchitecture is, after all, a representational art – an art of portraiture, if you will – and what is portrayed in it is precisely the multiform structure of desired relationships between human beings, their institutions, and their natural world.

– Henry Cobb, architect

The question is not whether architecture constructs identities and stabilizes meanings, but how and in whose interests.

– Kim Dovey, *Becoming Places* (2010: 45)

What makes cities like London, Paris, or Vienna distinctive and recognizable for citizens and visitors? What role do institutional actors play in constructing a city's identity over time and what sign systems do they use? City identity is a distinct form of collective identity that hinges on multiple actors' perceived uniqueness and meanings of place rather than organization (Albert & Whetten, 1985; Selznick, 1957) or social movement built on allegiance to a cause or a group (Owens, Robinson & Smith-Lovin, 2010; Poletta & Jasper, 2001). City identity is constructed over time and consists of collectively shared perceptions about a city's sustained "character" or "ethos" (Bell & de-Shalit, 2011), which architectural theorists call *genius loci*—the distinctive spirit of a place (Norberg-Schultz, 1970).

When explaining cities, scholars refer to the foundational role of material sign systems, such as the exclusivity of space and geographic locality (Simmel, 1997a), the visual style of a city such as its distinctive architecture (e.g., Abel, 2000; Kostof, 2005; Vale, 2008), or its rhetorical depictions in books, guidebooks and articles. An implicit and explicit aspect of these explanations is that city identity is historically anchored in time and place, which enables its distinctiveness (Mumford, 1968). Thus, city identity is inherently multimodal and constructed by and across many institutional actors over time. While city managers, politicians, and

communication agencies are increasingly concerned with a city's identity, their strategic plans (Brandtner, Höllerer, Meyer & Kornberger, forthcoming) and city branding initiatives (Eshuis & Edwards, 2013) communicate but cannot by themselves create that identity. City identity construction is an open question for organizational scholars, who have paid only scant attention to it (see Czarniawska (2002) for an exception), focusing instead on collective identities of organizations or social movements.

In this article, we draw on and integrate architectural theory (e.g., Abel, 2000; Roth, 1993) with institutional theory (e.g., Jones, Maoret, Massa & Svejenova, 2012; Jones & Massa, 2013) and cultural sociology (e.g., Cerulo, 1995; Simmel, 1997a/b). We do so to demonstrate how a city's identity is historically embedded in its architecture through “conscious attempts of designers to create a sense of place” (Dovey, 2010: 3) and unique ‘presence’ (Abel, 2000). Architecture is “a nonverbal form of communication, a mute record of the culture that produced it” (Roth, 1993: 3), and constitutes a memory form, allowing us to re-interpret the past into the future (Schultz & Hernes, 2013). Architecture may illuminate different historically and spatially situated layers of city identity; it offers a portrait through time that enables inhabitants and visitors to “read” the city (Campbell, 1992: ix).

A city's identity, constructed and communicated through its architecture, is comprised of three sign systems—material, visual and rhetorical—interacting to define in what ways a city may be distinctive and how its meanings have evolved over time. We separate these sign systems for analytical clarity, but the built environment is multimodal (Ravelli & McMurti, 2016) because the same sign communicates materially, visually and rhetorically. For example, the Eiffel Tower is a material referent, visually seen from many locations, which enables people to read and locate themselves within the city. It is a stylistic referent whose form and design record

the transition from classicism to modernism. It is also a rhetorical referent, standing for the city of Paris.

We posit that each of these three sign systems and their combination (e.g., multimodality) has specific affordances (Bezemer & Kress, 2016; Kress, 2000; Kress & van Leeuwen, 2011; Meyer, Höllerer, Jancsary & van Leeuwen, 2013) that enable constructing, communicating and deciphering a city's identity over time. The material sign system includes the city's topography and built environment in the form of neighborhoods, buildings, parks and roadways in ways that direct inhabitants and visitors' movements and (inter)actions (Lynch, 1960/2005; Simmel, 1997a/b). For example, Paris has a distinctive material form (e.g., white stone and building height) and spatial layout (e.g., straight, wide boulevards that cut through circular arrondissements from city center). Visual sign systems, such as architectural styles, are the customary construction and ornament (Hamlin, 1891) that encode and showcase a city's history and culture. For example, Paris' recognizable architectural style of white stone facades provides visual continuity across arrondissements (Lynch, 1960/2005). The rhetoric sign system, used extensively by critics and writers (e.g. in newspaper articles, books and guidebooks), entails interpretation of the city's identity for citizens and visitors, highlighting what and who is important. For example, Paris's identity is constructed rhetorically through writings from great novels to destination guides that entice and direct visitors' activities but also influence inhabitants' perceptions of their city. Each of these sign systems individually communicates the city's identity. Analyzed or experienced in combination, they may reinforce certain identity aspects, while questioning others.

To illuminate city identity, in our study we employ a multimodal approach (Kress & van Leeuwen, 2011) which attends to the material, visual and rhetorical sign systems grounded in

architecture, their characteristic modes and affordances, as well as the primary institutional actors that engage with them. We also acknowledge the interaction of the material, visual and rhetorical and how it not only helps construct city identity but also creates a city's image, e.g., how inhabitants think others view it (Dutton & Dukerich, 1995). For example, multimodality enables legibility—how easily inhabitants and visitors can read and navigate the city (Lynch, 1960/2005). The material order and visual styles of a city interact, such as the winding narrow streets with white buildings of the Parisian Latin Quarter versus the straight boulevards and modernist buildings of the 13th arrondissement of Place d'Italie, to demarcate neighborhoods and enable people to locate themselves within it.

We engage in a comparative case study of Barcelona and Boston, two cities with notable similarities, to examine their identity and meaning created and communicated by different institutional actors, such as architects, city planners, international guide book writers and local cultural critics as they perform semiotic work (Bezemer & Kress, 2016).

CITY IDENTITY THROUGH ARCHITECTURE: MATERIAL, VISUAL AND RHETORICAL EXPRESSIONS OF INSTITUTIONAL ACTORS

A city's identity is constructed and stabilized through material, visual and rhetorical sign systems by different institutional actors: professionals and politicians who build or regulate the built environment as well as critics who interpret it. These institutional actors are “culturally legitimated theorists” (Strang & Meyer, 1993), who analyze, educate and evaluate (Shrum, 1991). In Table 1, we map the primary institutional actors, modes and affordances for each sign system in constructing city identity.

Insert Table 1 about here

City Identity as Material Sign System: Topography, Landmarks and Iconic Buildings

The city's material sign system articulates and encodes her identity: countless decisions, peoples and core institutions involved in, reproduced by or challenged with these decisions (Jones et al., 2012; Jones, Meyer, Jancsary & Höllerer, forthcoming) over time. For example, Paris' distinctive material form of white stone and spatial layout (e.g., boulevards that bisect circular arrondissements) reflect her core institution of the State (Napoleon III), designer (e.g., Haussmann) and specific history: Napoleon III hired Georges-Eugène Haussmann to transform Paris from a dark, medieval maze of streets into a modern metropolis. The material order of a city is central to defining its legibility (ease of reading the city) and guiding its sociability (who interacts with whom); thus, material order offers the foundation for and possibility of a distinctive, shared city identity.

The material order of cities has three central characteristics—exclusivity, uniqueness and fixedness—that support shared interactions and identity (Simmel, 1997a). Exclusivity reduces identity confusion and hybridity: one can be in Boston or New York, but not both simultaneously, and few inhabitants hold multiple residencies. Uniqueness is evoked by topography—natural and built. A city has an initial material order defined by its “natural circumstances of topography, soil, and climate”, which are used by landscape architects to evoke what is distinctive about a place, such as Olmsted's designs of Central Park in New York City or the Emerald Necklace in Boston (Olmsted, 1866/1997: 104), which are defining features of each city's identity. In terms of the built topography, buildings can become iconic for a city, such as Arc de Triomphe, Notre Dame Cathedral and Eiffel Tower for Paris, encapsulating the city's key histories and peoples. If such buildings are destroyed, whether in urban renewal, war or terrorist acts, part of city identity is erased and “constitutes a loss of historical memory” (Kostof, 2005:

141). In contrast, “conserving the historic buildings and institutions of a neighborhood can preserve the icons of community identity” (Calthorpe & Fulton, 2001/2005: 335).

Fixedness orients social (inter)action because durable structures, natural or human, define where one walks and how one navigates a city. It reveals the tight coupling of material order and social relations, as reflected in the term “social fabric”. A city’s fixedness may be based on human or automobile scale (Blake, 1996), where streets serve “contradictory functions such as public thoroughfare and residential meeting ground” (Kostof, 2005: 191). When a city’s material order is of human scale, it offers intimacy, enabling “foot people” (Jacobs, 1961/1993: xii) to appropriate it by walking (de Certeau, 1984). When walking, parks, squares and boulevards can become “trunk routes of communication between it and the distant parts of the town” (Olmsted, 1870/1997: 83) and “threads leading to absolute or partial centres” holding the city together (Simmel, 1997a: 165). A city’s material form, seen in her parks, boulevards, squares and walls, combines both “focus and limit” that “contribute to the social identity” (Duany & Plater-Zyberk, 1993/2005: 207). The material order directs social interaction and creates “common ground”—the shared experience of inhabitants and visitors that underpins city identity (Kostof, 2005; Lynch, 1960/2005; Zaitzevsky, 1982). The material order may, however, inhibit social fabric by erecting barriers, such as walls or freeways that limit social interaction and communication or generate identity contestation, such as west side versus east side. It shapes city identity and its experience as holistic or fragmented by enabling or prohibiting people to read and walk it.

City Identity as Visual Sign System: Architectural Styles and Visual Continuity

The visual sign system, seen in architectural styles, records the city’s history, guides its legibility, and reflects its distinctiveness, acting as mnemonic device and “*aide mémoire*”

(Cerulo, 1995) that evokes identity . The different styles of the city constitute different identity layers, e.g. Paris' Art Nouveau and Art Deco buildings, or Barcelona's gothic and modern architecture. For example, Gaudí "created an architecture rooted in Catalonia's Moorish and medieval past, ablaze with colored tile, exploiting the thin, curved tile vault construction for which Catalonia had long been famous...It is a unique vision of a functional, structurally utilitarian, organic architecture that could have been created only in Barcelona" (Roth, 1993: 454).

When architects capture and encode city identity in a style, they allow experiences of the city to be shared and make its history recognizable through the built environment. If buildings seem strange it is because they are not built through shared visual vocabularies (Roth, 1993), i.e. the history and narratives encoded into the buildings are not readily read or decoded by inhabitants and visitors. Architectural styles capture the history, experiences, conventions, and cultural understandings of their creators and inhabitants to distill and communicate a city's identity (Campbell, 1992; Kostof, 2005; Roth, 1993; Vale, 2008). They also carry institutional logics associated with the specific mix of clients behind the buildings (Jones et al., 2012).

Architectural styles enhance a city's legibility—the ease with which the city can be read—and enable parts of it to be "recognized and organized into a coherent pattern" (Lynch, 1960/2005: 2-3). For example, as noted earlier, the wide boulevards of Paris lead to the center and facilitate navigation its center. Styles also enhance legibility by signaling boundaries of and shifts in neighboring social spaces. Neighborhoods "have something in common, a kind of affinity of *style*" that is "immediately recognizable", despite discrepancies or exceptions (Bourdieu, 2005: 44). For example, the Boston Commons orients one in the city, with shifts in style signaling new neighborhoods. On its eastern side is the theater district comprised of 19th

century buildings with elaborate facades and pillars. On its northern top is Government center with large 20th century modernist concrete offices bordering the small red brick buildings of the Italian North end. Toward its south,, Commonwealth Avenue connects 17th century common to 19th century Parisian style residential brownstones. Architectural styles provide visual cues enabling people to read and locate their place within and thus navigate the city.

City Identity as Rhetorical Sign System: Critics and Texts

Critics engage in “rhetorical acts” (de Certeau, 1984) that reveal city identity by decoding the cultural meaning of its architecture and highlighting its distinctiveness. These rhetorical acts may reveal the city not only through amplifying what is present, but revealing Iso by what is absent —i.e., the “silenced” discourses (Jancsary, Höllerer & Meyer, 2015). By examining highlighted and elided areas, we can identify meanings associated with the city identity—her history, peoples and events—that are valorized or erased. These rhetorical acts involve figures of speech that elaborate the rhetoric of walking (Certeau, 1984).

The first rhetorical act is synecdoche, which names a part instead of the whole that includes it (de Certeau, 2002: 101), such as the words or symbols of the Eiffel Tower standing for Paris in written text (or on postcards and websites). Synecdoche expands a spatial element to make it play the role of a “more” and “takes its place”. The second rhetorical act is asyndeton, which “opens gaps in the spatial continuum, and retains only selected parts of it” (de Certeau, 2002: 101),undoing continuity. For example, if critics focus on New York City as Broadway and Wall Street, they reduce its meaning to theater and money, eliding its other parts and disconnecting adjacent neighborhoods. Thus, New York City becomes known for only two aspects of its complex identity. Both synecdoche and asyndeton create symbolic boundaries (Lamont & Molnar, 2002), revealing who/what is included and excluded as members and

meaning of the city. Thus, rhetorical acts by institutional actors provide insight into the city's identity, affirming or denying its parts.

We can examine these rhetorical acts and their meaning through key texts such as newspaper articles and guidebooks by key institutional actors such as architectural critics and guidebook writers that engage different audiences: inhabitants and visitors, respectively. These two sets of rhetoricians offer distinct perspectives on city identity, counting with semiotic resources that “are reserved for specialists, or known in different ways by those who actively use them for semiotic production and those who are their ‘receivers’ (‘consumers’, ‘users’)” (Kress & van Leeuwen, 2011: 112).

METHODS AND DATA

To investigate the role of architecture as a multimodal sign system for constructing city identity, we compared Barcelona and Boston from 1970-2006 for three reasons. First, Barcelona and Boston are cultural centers of their respective countries and magnets for talent due to the concentration of prestigious universities, important artists over time, world class cultural organizations and cutting edge businesses and research centers. Barcelona has been known as the “Paris of the South” for its charms, the “Manchester of Spain” for its role as an industrial centre, or the “Pearl of the Mediterranean” for its privileged coastal location (Sala, 2007). Boston has been called the “Athens of America” by novelist Henry James due to its founding role in American democracy and culture, and its world-class higher education and arts organizations.

Second, being “sister cities” since the early 1980s, the two cities see themselves as comparable. They both express their identity in architecture, which is both stable and dynamic over time. Barcelona was awarded the 1999 Royal Institute of British Architects' (RIBA) gold medal, the first and only time so far to a city. It is “a rich blend of art and industry, color and

passion, history and invention”, which “absorb[s] new people and ideas while stubbornly clinging to local identity” (Semler, 1992: 1). Boston is an intimate, walking city that has experienced waves of immigration, shaping and reshaping the city; it anchors its future by building on and retaining its sense of the past (Campbell, 1992). These similarities enabled us to make comparisons between the two cities even though they differ in population size and land mass.

Third, the 1970-2006 period allows to capture the dynamic nature of city identity (Gioia, Schultz, & Corley, 2000) as both city underwent stagnation, urban renewal and regeneration that engaged both continuity and changes in the built environment and shifts in meaning. We employed multiple data sources and used multi-method triangulation, which we describe next.

City Identity as Materially Constructed by City Designers and Planners

We read books on the histories—political, cultural and architectural—to identify key time periods, areas and the role of architectural construction, renovation, and preservation in Barcelona and Boston, most of which are not referenced due to space constraints, except for those we cite explicitly. We also sought to identify the political changes and key institutional actors such as Mayors and architects, who designed the city, over time. We also collected mayor speeches, but do not systematically analyze these.

City Identity as Visually Constructed by Architects

To assess the style of each city and its architectural continuity, we used several guides for Barcelona: the Barcelona’s Historical Atlas of Architecture (Bahamón & Lozanitos, 2007), the Barcelona Architecture Guide 1929-2002 (González & Lacuesta, 2002) and the Online Guide to Catalan Architecture (<http://www.geocities.com/medit1976/>), in which architectural professionals select and describe the buildings and architects most important to establishing each

city's style and collective identity. For Boston, we used the AIA Guide to Boston (Southworth & Southworth, 1992, 2008). We traced the educational institutions, architectural firms and other information for the primary partners of architectural firms that built five or more of the city's most important buildings and created a herfindahl to assess the concentration of an architect's buildings, indicating a consistent stylistic approach versus a plurality of styles. We complemented this analysis with insights from the Michelin guidebooks and city's critics.

City Identity as Rhetorically Constructed by Critics

We employed the perspective of professional critics and guidebook writers for Michelin. For the professional critics, we downloaded and analyzed articles by the leading newspaper's architectural or cultural critic for each city during 2003-2006: Llatzer Moix was cultural critic of La Vanguardia, one of the oldest and the highest-circulation daily newspaper in Catalonia, and author of books on city architecture. Robert Campbell is architectural critic of the Boston Globe and a Pulitzer Prize winner. We also downloaded letters to the editor about architecture from the Boston Globe (there were very few on or about architecture or responses to Robert Campbell). For letters to the Editor of La Vanguardia, we used the book "Señor director..." ("Mr. Editor"), published by the newspaper in 2006, which offers a view of the city as seen through the eyes of the readers. These were used as background information on issues raised by citizens regarding architecture and have not been analyzed systematically.

For guidebooks, we used Michelin for Barcelona and Boston at three time periods: 1981/82 (the first edition available of Michelin for Boston), 1993 and 2004/2005. Ten-year periods provided the opportunity to reveal both continuity and change in a city's artifacts (e.g., new buildings). Michelin guidebooks were the only consistently available guide books for both Boston and Barcelona from 1980 through 2000s. In contrast, *Lonely Planet* focused on Asia and

India (en.wikipedia.org/wiki/Lonely_Planet), *Rough Guide* on Greece in the early 1980s (en.wikipedia.org/wiki/Rough_Guides) and Rick Steve's on European countries rather than American cities (www.ricksteves.com/about-rick). Thus, Michelin Guide books provided the only consistent data source to compare Barcelona and Boston from 1980-2006.

To analyze the city as rhetorically constructed by the newspaper critics and guidebooks, we identified the districts, neighborhoods and areas they described for Barcelona and Boston. To guide our coding of the texts, we used each city government's official listing of its neighborhoods and areas as well as the towns and cities included in the great metropolitan area surrounding each city. We coded paragraphs within the documents for mentions of these neighborhoods, towns and cities to provide a systematic approach to understanding the semiotic meaning of who and what the city is. We then used the visual analysis tool in MAXQDA to generate for each city a matrix of codes to create co-occurring mentions of neighborhoods, towns and adjacent cities. We imported these data into UCINET and used NETDRAW to visualize the data and contrast the city's identity from the newspaper critic's and the guidebook writer's perspective on a single graph. We used these visual data and texts to assess rhetorical acts of synecdoche and asyndeton, e.g. whether the city's neighborhoods were perceived as interconnected or disjointed, whether some neighborhoods (or adjacent cities) were used to symbolize the city, and to what extent the interpretations presented to inhabitants by the newspaper critics and to visitors by the guidebooks coincided or differed.

FINDINGS: THE SIGN SYSTEMS OF BARCELONA AND BOSTON

We drew on multiple sign systems and their respective modes of communication to reveal the city identity of Barcelona and Boston. We employed historical narrative, textual comparisons and visual analysis of architectural styles for these two cities.

Material Sign Systems

The material orders of Barcelona and Boston have undergone profound changes between 1970 and 2006, which enables us to assess changes and stability to their identities. Since the material order captures decisions as cities evolve over time, it is best understood in relation to city's historical context, its uniqueness and fixedness from natural and human-made topographies.

Barcelona. The material order of Barcelona provides the foundation for her identity, which is both local and cosmopolitan. Barcelona is first and foremost a Catalan capital and a Mediterranean city (officially bilingual with Catalan and Castilian Spanish). Hemmed between the Mediterranean Sea, the Llobregat and Besòs rivers and the Collserola ridge, Barcelona's natural topography enabled her to be an important political, religious and trade centre by the 13th century. Barcelona continuously revises her material order. She originally controlled her space through walls until 1854 when they were demolished and Ildefons Cerdà planned her orderly urban expansion, known as L'Eixample. The late 19th and early 20th centuries, when she hosted the 1888 and 1929 Universal Exhibitions, fueled the construction of buildings by renowned architects of Catalan modernism, such as Gaudí, Domènech i Montaner, or Puig i Cadafalch (Sala, 2007) that became landmarks. Barcelona's architectural heritage was damaged by the 1936-1939 Civil War and Franco's dictatorship from 1939-1975 created decay, "frustration" (Maragall, 1999: 240), "urban neglect" (Hughes, 1993: 37) and loss of her "comprehensible shape...in the absence of any thoughtful or comprehensive planning" by the city government (Hughes, 1993: 13).

After Franco's demise in 1975, "a great number of urban renewal projects were carried out by the city's three Socialist mayors, Serra, Maragall and Clos, and their collaborators"

(Bohigas, 2004: 91). They sought Barcelona's economic, social and cultural renewal to affirm her identity as "progressive, egalitarian, gradualist" (Marshall, 2004: 17). The city's "social policy" had a "hardware" element involving the creation of public spaces and amenities in all neighbourhoods" (Borja, 2004: 99). Maragall (1999: 237), the Mayor from 1982 to 1997, both conserved and reinvented the city: "No one can survive merely by conservation. If there is no new construction, the city cannot stand; not even the old will endure. Each city must find its own formula of combining existing symbols with new ones." This combination of old and new created "a shared framework which provides meaning... To build in Barcelona, then, is analogous to writing in Catalan; the existing both accepts the new and is changed by it" (Maxwell, RIBA Gold Medal Jury Citation, 1999: 234).

Barcelona's identity, as revealed through her material order, is stabilized by public spaces, such as beaches, squares, parks, markets, and libraries as shown in Figure 1. In the span of three years, from 1981 until 1983, 55 new squares and gardens were initiated or opened (Caballero, 1983) to become focal points for encounters within and between adjacent communities. City planners shifted their attention from parks and squares to markets and public libraries and the agenda of activities in them, as spaces for bringing people together. In 1992, the City Council initiated a planned modernization of Barcelona's markets—a network of 40 municipal facilities around the city, which seeks the urban, social and commercial recovery of the neighborhoods— and converted them into city icons (Barcelona markets' website). For example, the remodeled Santa Caterina market preserved the old façade, gaining a new roof by reusing traditional materials. At times, new designations that aim to launch a distinctive identity are created through acts of urban renewal and modifying Barcelona's preservation and heritage

policies. For example, 22@ was a transformation of Poblenou's industrial area into a district for urban innovation. As noted on the Barcelona city hall's website (Jan, 2017):

In order to favor this restoration process for the symbols of Poblenou's industrial past, Barcelona's Catalogue of Heritage Sites has been modified—Modification of the Special Plan for Historical/Artistic Architectural Heritage in the city of Barcelona—which was born out of the desire to recognize that the city's industrial past was one of elements that most influenced the definition of urban spaces, particularly in Poblenou.

Insert Figure 1 about here

In constructing Barcelona's material order, politicians and urban planners capitalize on her natural and human topography to revitalize "authentic collective identities" that are anchored in "neighbourhoods or identifiable fragments" (Bohigas, 2004: 93). These neighborhoods have distinctive architectural elements, such as markets, libraries, other buildings, parks, and plazas that, together, enable the city's social fabric and construct her identity: "Barcelona is now more whole in every way, its fabric healed yet threaded through with new open spaces, its historic buildings refurbished yet its facilities expanded ... Past and present, work and play are happily inter-meshed in a new totality that is more than its often splendid parts, and is better connected even to sea and mountains" (RIBA Gold Medal Jury Citation, 1999).

Boston. The material order of Boston expresses both progressive ideals and conservative practices. Boston consistently transforms her topography to construct her future while holding fast to her past. In her earliest years, Bostonians routinely "cut down its hills to fill its bays," transforming the material and spatial order of the city (Whitehall & Kennedy, 2000). As the Michelin Guides of 1983 and 1988 (p. 88) note "Boston, perhaps more than any other city, is the product of changes brought about by the hand of man. The names of certain areas no longer seem appropriate: the Back Bay and South Cove are dry land, and there is no beacon on top of Beacon

Hill.” Boston’s challenge is to embrace this creative tension between old and new, change and stability in her identity.

Boston’s material order expresses her progressivism that builds upon tradition to celebrate her independence and the value of culture. She initiated the American revolution (Boston tea party, first shot heard round the world) and memorializes this in the Freedom Trail that winds through the city to key architectural sites. She erected the first American university (Harvard, 1636), the first public school (Boston Latin) and populated greater Boston with over 60 colleges and many top rate universities to anchor her identity around education (e.g., MIT, Harvard, Boston University, Boston College, Tufts, Northeastern, Wellesley). She has world-class cultural institutions (e.g., Boston Symphony Orchestra, Museum of Fine Arts) and a park system, the Emerald Necklace, designed by Frederick Law Olmsted to spawn civic mindedness and city identity (Zaitzevsky, 1982). Boston was the first to enact state-wide preservation laws to retain key buildings that encode her histories and evoke her identity (Holleran, 1998).

When Boston suffered economically in the 1950s and 1960s, she opted to radically change her material order by constructing an elevated freeway—the Central Artery—to reduce congestion and increase city revenues (Jones & Lee, 2016). The Central Artery, as shown in Figure 1, and its associated urban renewal destroyed an entire neighborhood (the West End chronicled by Gans, 1962) and bifurcated numerous immigrant neighborhoods such as Chinatown, the North End (Italian) and South Boston (Irish). The Central Artery spawned resistance that culminated in state wide preservation laws and prompted Boston to reflect on and find ways to reconnect her neighborhoods. From 1991-2004, the “Big Dig” re-aligned Boston’s material order by removing the Central Artery, burying it underground and creating green space, called the Rose Kennedy Greenway.

The Greenway project strove to reunite Boston's fractured neighborhoods. The Boston Redevelopment Authority (BRA) in its 2003 report described the Greenway "as a once-in-a-lifetime opportunity to make both connections and reconnections: to connect the city to the harbor, certainly, but beyond that to connect *us* with a transformed experience of the city, to connect us to our history, our past, present and future—our memories and desires" (italics in original). The BRA sought to "heal the wounds" that they had inflicted upon Boston with the Central Artery and urban redevelopment. The BRA drew upon Boston's history and identity: Olmsted's Emerald Necklace. The "Rose Kennedy Greenway [is a concept] for extending the Emerald Necklace and bringing it closer to completion...an opportunity to dramatically enhance Boston's park system and to reunite the districts that were torn apart in the 1950s". The BRA claimed: "The parks ought to demonstrate our triumph over our mistakes and our ability to turn blight into delight." They also acknowledged "the damage, the tear in the urban fabric, caused by the demolition of hundreds of residential and commercial buildings necessitated by the building of the elevated highway.... The Rose Kennedy Greenway makes it possible to reweave the urban fabric and reunite the downtown districts." By removing the Central Artery, which imposed physical barriers between neighborhoods, Boston reshaped her material order to make visible the neighborhoods of Boston to one another. Upon completion of the Greenway, Campbell, the architectural critic, voiced awe and exuberance (2004 Boston Globe Dec 26): "I don't think anyone predicted how huge and powerful this space would feel. It's stunning. Standing in it, you are in a city that has suddenly been opened up and made visible....it is going to transform Boston forever." Thus, the design of the Rose Kennedy Greenway sought to anchor Boston's material order in her past while moving the city toward her future.

Next, we examine the visual sign system that may further (de)stabilize a city's identity.

Visual Sign Systems

A city's identity is visually represented and signified through the architectural styles of its urban fabric, which is more easily recognized when there is concentration of architects' styles, particularly when they create distinctive neighborhoods and districts to produce visual continuity. To capture the history of each city and provide a contrast with change, we analyzed the historical concentration of buildings and architects of Barcelona and Boston from 1790-2006 by creating a herfindahl measure of the cities' most prolific and important architects and their buildings, shown in Table 2. We start in 1790, which reflects the rise of the industrial revolution, which transitioned from agrarian to city dwelling, and occurs before major changes in Barcelona in the 19th century (e.g., L'Eixample) and coincides with Boston's development in the late 18th century (e.g, Charles Bulfinch and those trained by him). A few key architects visually created continuity within neighborhoods. Although the building concentration is quite small, between .03 and .08, these buildings act like highlights of color in a painting that direct the eye through space.

Insert Table 2 about here

Barcelona. Barcelona's history and identity is encoded visually in different styles associated with its 10 districts and their neighborhoods. The city's website, for example, refers to the 10 Barcelonas, under the slogan "Experience one city. Discover 10". As revealed in Figure 2, they have different visual signature: the Gothic Quarter includes the oldest part of the city and has a visible gothic style as its name suggests. L'Eixample contains the famous octagonal blocks and numerous iconic buildings from the city's Modernism. Gracia is known as the city's bohemian district with atmospheric squares and charming streets, and 22@ (formally not an administrative district but publicly promoted as the city's innovation district) mixes architecture from Barcelona's industrial past as the "Catalan Manchester" with contemporary architecture.

The districts and their neighborhoods thus contain traces of different times and priorities within the city, as well as have distinctive identities defined around their own memory forms and distinct temporalities (Schultz & Hernes, 2013).

Insert Figure 2 about here

Over 85% of the 43 key architects who designed five or more building projects in Barcelona in the period 1790-2006 are Catalans and more than half of those have been born in the city. Over 80% have been or continue being related to Barcelona School of Architecture (ETSAB), founded in 1875, as students or faculty, some of them taking on leading positions, such as the renowned modernist architect Domènech i Montaner who was its Director for fifteen years. ETSAB's strong bond with the city of Barcelona is manifested in different ways, among which that ETSAB students and faculty have been and are actively involved in (re)building the city, contributing to the architecture and urban design departments of Barcelona's city council, such as the case of Oriol Bohigas, Director of ETSAB and Head of Planning of pre-Olympic Barcelona. In addition, Barcelona is the seat of COAC (the Association of Architects of Catalonia, founded in 1874, currently with some 10.000 members). The combination of educational institutions and professional associations suggests opportunities for stabilization of the city's identity and its meaning. However, Barcelona's key architects also have international practices and/or been visiting professors at Harvard Graduate School of Design, UCLA, or Columbia University, thus connecting the city with other places and architectural practices.

As noted, the city's identity is both stabilized and unified by having distinctive local architects build across the city (e.g., Gaudí's architecture is found in different neighborhoods). Regarding the buildings of star architects in Barcelona, critics have tried to justify their

contextual connectedness, as shown below in relation to Jean Nouvel's Agbar Tower (among the new architectural icons of the city):

The Agbar Tower is based on the catenary curve, employed by Barcelona's most famous architect, Antonio Gaudí. ... Agbar, a concrete structure, further alludes to Gaudí in the panels of red and blue glass in its outer skin, which recall the broken colored tiles of Modernismo decoration (Lubow, 2008).

The architectural styles of Barcelona offer both distinctiveness and coherence to her identity as a Catalan but diverse city. Key Catalan architects guide and oversee urban planning and build across neighborhoods to enable visual continuity of the Catalan style and identity. The visual coherence of Barcelona's style is both distinct between neighborhoods, but also provides continuity across neighborhoods, giving a coherent sense of Barcelona as a city with a Catalan, Mediterranean and cosmopolitan identity.

Boston: Boston's architectural styles reflect her identity of being both progressive and conservative, as described by architectural critic Robert Campbell (2004 Boston Globe July 26):

Boston is often called the most European—meaning the most traditional—of American cities...it is also true that we have often been at the cutting edge in architecture. Charles Bulfinch, who designed the Massachusetts State House (built in 1798), was a national leader in architecture in his day. So, later, was H.H. Richardson, designer of Trinity Church (1877), a building that has seldom, if ever, failed to make any list of the 10 greatest American buildings. So, still later, were the young modern architects like I.M. Pei who poured from the Harvard Design School under the tutelage of Walter Gropius in the mid-20th century. Boston embodies the paradox of any city: How do you hang onto the past while welcoming the future?

Boston's history and identity, like Barcelona's, are visually imprinted into its neighborhoods, particularly Beacon Hill, Back Bay and the North End, as seen in Figure 2. Each of these neighborhoods expresses a different style created by specific architects. Beacon Hill was the work of Charles Bulfinch, Asher Benjamin and Alexander Parrish, who modeled their architectural style of British Georgian and small squares to create, as the Michelin guide notes, an "extraordinary visual unity, resulting from the predominant use of brick, a uniform three- to four-

story building height, and harmonious blending of flat and bowed facades” which has been preserved due to its designation as a historic district in 1955. Back Bay, in contrast, is the work of architects Henry Hobson Richardson, McKim, Mead and White and Ralph Adams Cram, who drew on French inspiration of stone townhouses, wide boulevards and mansard roofs. As Michelin Guide notes: “Architect Arthur Gilman's [Back Bay] master plan called for five east-west axes, the grandest being Commonwealth Avenue, a wide Parisian-style boulevard divided by a central planted mall. To the north, Copley Square functioned as the principal public space and a grand setting for prominent civic institutions....The Back Bay's early residential architecture reflects contemporary French tastes, as evidenced by the omnipresent mansard roof, the controlled building height and a unified streetscape.”

Urban renewal brought renovations of historical buildings, such as Quincy Market and Commercial Wharf that reflected history and added something new. These renovations were immediately recognizable architectural styles familiar to Bostonians; their visual vocabulary and styles melded with existing buildings, as shown in Figure 2. Other urban renewal projects, however, are perceived as alien and undecipherable. For example, the modernist Boston City hall (Figure 2) is experienced as alien to Boston’s historic landscape and her identity. Bostonians consistently rate it one of the ugliest buildings in Boston (see Campbell, 2010 Boston Globe March 10). Boston City Hall, which replaced Scollay Square, was designed by the architects Kallman, McKinnon and Knowles—three Columbia University Professors of British and German origins—who emulated Le Corbusier’s La Tourette. Le Corbusier’s architectural vocabulary is neither part of Boston’s history and architectural style, nor prevalent in the U.S. It is a massive concrete block inserted into the midst of its historic downtown landscape of red brick, small scaled buildings. The building has been rejected by Bostonians and Mayors have

tried to demolish or sell the building (en.wikipedia.org/wiki/Boston_City_Hall). As Robert Campbell (2006 Boston Globe Dec 13) explained: “It’s hard to believe now, but in a poll of architects and historians in the bicentennial year of 1976, the building was voted one of the 10 greatest works of architecture in American history. No way would that happen today. And even back then, the building was a lot more popular with architects than it was with the public.” The controversy of Boston City Hall speaks to how new architectural styles may diverge from the city’s identity and be rejected as alien or how the new style may capture and reinforce city identity, such as the modern glass skyscraper Hancock Tower, which reflects Trinity Church Copley in its windows (see Figure 2).

Rhetorical Sign Systems

A city may be rhetorically constructed through synecdoche, where a part represents the whole or through asyndeton, where fragments represent the whole, cutting out parts of the city. Our analysis illuminates the identity of Barcelona and Boston through the newspaper critics and Michelin Guide writers. Table 2 shows that Barcelona is 2.3 times the population of Boston with 1/3 of the latter’s area in square miles or kilometers. Given Barcelona’s greater population in a smaller area, we would expect more interaction among its residents and more consensus over which districts and neighborhoods comprise it. However, there is less consensus between the Michelin guide writers and the newspaper critic for Barcelona than Boston. We see this in the network density measure of .2189 in Figure 3a for Barcelona, which indicates little overlap, whereas Boston’s network density of .8622 in Figure 3b reveals strong overlap between newspaper critics and guidebooks.

Insert Table 2 and Figures 3a and 3b about here

Barcelona. Taken together, the texts by the newspaper critic and the guidebook writers mention only 24 districts and neighborhoods, less than a third of the “official” 10 districts and 75 neighborhoods. As Figure 3a shows, not only a few neighborhoods are highlighted, but also critic and writers focus on different neighborhoods. The Michelin Guide writers employ synecdoche by labeling Barcelona as “above all a Catalan town.” Catalan stands for Barcelona. Beyond this one common identity, the Michelin Guide book writers use asyndeton to depict the city’s identity through an initially limited number of historical neighborhoods, which expands over time. A comparison of the Michelin Guides, with 1974 as a base, reveals the increasing number of buildings rated positively for Barcelona: 17 in 1974, 20 in 1983, 37 in 1993 and 56 in 2005. The 2005 guide book edition includes 8 of its 10 formal districts and a much greater number of neighborhoods. A rhetorical comparison of the 1982, 1993 and 2005 guidebooks highlights the distinct neighborhoods, which seem to depict different cities. In 1982, the guidebook spotlights three neighborhoods: the Gothic Quarter, the Ciutadella and Montjuïc, which represent the old city, and the two areas developed most for the 1888 and 1929 Universal Exhibitions respectively. Gaudí’s work is listed under additional sites, and his La Sagrada Familia church has a one-star importance, same as the Barcelona Zoo. The 1993 guide book, following the 1992 Olympic Games celebrated in the city, defines Barcelona as “most attractive, stimulating city, especially from an architectural point of view” and a three-star building appears for the first time: the Museum of Catalan Art, featuring Romanesque and Gothic art. Gaudí’s buildings improve in ranking, with Park Güell having two stars while his two buildings on Passeo de Gracia, Casa Batllo and La Pedrera, get a star each. The 2005 edition relates a city with much richer and multifaceted identity (artistic, cultural, industrial, and educational), at the intersection of past, present, and future: “perhaps the most cosmopolitan of all Spanish cities ...

combining the traditional and the avant-garde to forge an identity that is both open and welcoming. Barcelona is many things: a Mediterranean metropolis, a major port, a centre for modern art, and a city that lives life to the full”. As shown in Table 2, over time the Michelin Guides apply less asyndeton (i.e. cutting out less and less) and more synecdoche (i.e. highlighting more parts of the city in representation of the whole). Table 2 and Figure 3a indicate the dramatic transformation of Barcelona’s architecture, illuminating Catalan as a stable and central dimension to an increasingly complex and diverse identity.

Newspaper critic Moix employs synecdoche, as shown in Figure 3a; he focuses on buildings by star architects rather than neighborhoods, offering a critique of Barcelona as “The city of the architects” (title of his 1994 book). In reading the city, he signposts specific buildings in the Santa Caterina, El Raval or Vila Olímpica neighborhoods, and Gràcia district that are distinctive, either for their architectural value and contribution to the city, or because they allow him to raise a burning issue—the overexposure of Barcelona to work by international starchitects: “Does it make sense to turn cities into collections of star architect’s labels when local professionals’ creativity is not equally stimulated? Should really all plans by star architects in Barcelona be considered good? Is so much branding needed in a city with a brand of its own?” For Moix, Barcelona’s identity is based on its unique locality: “The prize to the Jaume Fuster library of Josep Llinàs, over...the Agbar Tower of Jean Nouvel... could be interpreted as recognition ... of architecture that builds the city with modesty and conviction over one that imposes its personality on the urban texture.” He also voices Barcelona’s identity as diverse, global and welcoming. “Today Barcelona has perhaps an identifiable image, something similar to a brand, but... its soul is in the mixture of many cultures. ... Defend an identity at any price ... is a big mistake. We are all from all over the place... And this is also a way to be a Barcelonan.”

Our analysis reveals that Michelin and Moix rhetorically define the identity of Barcelona quite differently, employing an implicit temporal criterion: the former emphasizes the city's past whereas the latter evokes her present and future. Such spatially and temporally discrepant cues may breed confusion regarding a city's identity, as well as reveal inconsistencies between identity and image.

Boston. The critic's and Guidebook writers' rhetorical construction of Boston, compared to that of Barcelona, presents a more holistic and integrated view of who comprises the city. Twelve of Boston's 17 districts (71%) are listed by the critics along with a plethora of its 62 "official" neighborhoods. Unlike Barcelona, the neighborhoods are more often co-mentioned, creating a more integrated view of the city and who comprises it (seen in the density measure of Figure 3b, .8622). Both tend to emphasize the core historical areas of Boston and ignore the outer lying neighborhoods (e.g., West Roxbury, Roslindale etc.; gray circles in upper left of graph).

The guide writers engage in asyndeton; they highlight historically and architecturally significant areas, such as the "charming neighborhoods" of Beacon Hill, Back Bay, North End and Waterfront, easily walked on the Freedom trail. Michelin also reflects changing perspectives on Boston's urban planning from heralded to eschewed, as with the demolition of Scollay Square in the West End to build City Hall. In the 1981/2 version the controversy and demolition of the West End is elided whereas the "striking" new building of Government Center is highlighted. Perhaps the writer is aware of and deferring to architectural judgment: the building won an AIA award in 1976 and in 1979 was voted a "best building" in America by architects. In contrast, the 2004 version acknowledges the demolition of the West End, the removal of the primarily ethnic population, and how the controversial architecture of Government center is much hated by

Bostonians: “this top-heavy concrete pile has remained one of Boston's controversial architectural statements since its completion in 1968.” In the 2004 version, Government Center no longer rates a star, as it did in 1982 and 1993. Instead, the North End now merits attention. As Table 2 reveals, the guidebooks elide both the outer lying neighborhoods (e.g., Brighton, Allston, Jamaica Plain etc.) and the non-European neighborhoods of Chinatown and Roxbury. The city rating improved slightly from 1982 to 1993 and 2004, and the number of rated buildings increased slowly from 33 in 1981/82 to 35 in 1993 and 46 in 2004, reflecting the city’s incremental change.

As shown in Figure 3b, the center of Boston for newspaper critic Campbell, is Cambridge, which is a different city, and home to Harvard and MIT. This perception could reflect Campbell’s Architectural degrees from Harvard or how people define Boston by her most prominent universities. He also focuses on the South End, downtown and includes adjacent cities, expanding the category of Boston to the “Boston Area”.

Both Campbell and the 2004 Michelin guide discuss the West End, which is not an official neighborhood or district. Much of it was bulldozed in 1960s (the above-mentioned Scollay Square controversy that was immortalized by Herbert Gans in 1962) when urban planning removed the undesirable areas. Campbell (2006 Boston Globe Dec 10) explained that Boston’s urban redevelopment “grew out of Boston's great depression which “lasted from the late 1920s to about 1960” and resulted in replacing a whole neighborhood “by apartment houses that looked as if they belonged in Miami Beach. Seedy but humane Scollay Square became the urban Sahara that is now Government Center.” Interestingly, Boston City planning documents, as of 2003, started to again acknowledge the West End as a neighborhood. As Campbell (2006 Boston Globe) opined: “Today, 45 years after the loss of their homes, survivors of the neighborhood, who now are scattered throughout Greater Boston, still maintain a regular newspaper called the West Ender.” This shows

how a rhetoric mode can keep alive the memory of an area with distinctive meaning for city's identity despite its material destruction and visual disappearance.

In summary, Barcelona and Boston differ on how the writers rhetorically construct city identity.. Unlike the critics of Barcelona, Boston critics agree on who comprises the city and are more likely to weave these neighborhoods together into a more holistic city identity. Critics of Boston also recognize a materially absent identity of Boston—the West End—retaining a key memory and history rhetorically. The Michelin guide's ratings of buildings capture and symbolize the different rates of change in the city: dramatic and exponential in Barcelona, slow, steady and incremental in Boston.

CONCLUSION

TOWARDS A MULTIMODAL AND TEMPORAL APPROACH TO CITY IDENTITY

Our goal was to define and elaborate a multimodal approach to city identity based on architecture. City identity anchors collective identity in the distinctiveness of a place. Prior research on collective identities, however, has tended to ignore the vital role of place and our physical world in constructing and experiencing a shared identity. We offer insight into identity that moves beyond categories of actors or organizational membership to reveal how material, visual and rhetorical modes of constructing and communicating the distinctiveness of a place through architecture could impact our sense of identity.

Architecture is particularly suitable for such a multimodal approach to city identity construction. The material sign system defined by topography, such as rivers, mountains, streets, parks, walls or landmark buildings, underpins city identity and offers the most immediate experience of distinctiveness: is the city walkable, are its public spaces inviting, do they trigger collective memory of key people and events? The visual sign system depends on the material

because a style must be encoded into material form, typically buildings. In this way, the visual guides inhabitants or visitors as much as does the material. It renders the material easier to read and interpret, aiding city's legibility. When material and visual align, they reinforce identity, whereas their divergence generates confusion about that identity. The rhetorical sign system offers interpretations and gives meaning to the material and visual. Its influence in shaping city identity depends on the texts' resonance with audience's experiences and expectations. For example, newspapers are more likely referenced by inhabitants and guidebooks by visitors, yet the image of a city portrayed in the latter can create pride in or upset its inhabitants. Architecture is vital in constructing city identity through these three modalities. Our study pushes beyond collective identity studies that rely primarily on rhetorical texts—either interviews or written documents—to reveal that materiality and visuality are powerful forms of identification that interact with one another, and with rhetoric in the form of text, and that are central to how we experience a city and what meanings we associate with it.

Architecture is particularly suitable for revealing the temporal aspect of identity (Schultz & Hernes, 2013) because buildings sediment the historical past and also reveal yearnings for an envisioned. By examining the temporal processes of city identity and multimodality, we extend the temporality perspective from organizational identity change (Schultz & Hernes, 2013) to city identity dynamic, bringing in additional memory forms in the creation of meaning and accounting for the role of institutional actors, such as architects, urban planners, critics and guidebook writers. Institutional actors, especially architects and urban planners, engage in varying choices as to which materials express best city identity, e.g. traditional, new or a mix (Jones et al, 2012), what city layout is appropriate, where to put parks and squares, whether to demolish or rehabilitate a building. These choices are temporally anchored; they may seek to

reflect and honor the past, extend and reinterpret it or alter it by introducing new meanings for the future. The visual style of new buildings may draw upon a city's vocabulary contributing to continuity, or constitute rupture; it may be anchored in the past or may seek to express a different future. In terms of rhetorical system, rhetoric that taps into the lived or expected experiences of people is more likely to be attended to and reinforce a sense of city identity.

A limitation of this study is that we may portray a city as more coherent, spatially, visually and meaning-wise, than what is shared by different groups of inhabitants and visitors, some of whom have their "long associations with some part of his city", and for whom "his image is soaked in memories and meanings" (Lynch, 1960: 1). Daily experiences of the city inevitably revers, interrupt, or cut across its established orders (Lynch, 1960). Hence, it is important to comprehend whose stance is being constructed materially, visually, and rhetorically expressed in sign systems, and whose stance is invisible or silenced (Jancsary et al., 2016). This calls for understanding institutional actors' ideological positions (Meyer, Sahlin, Ventresca, & Walgenbach, 2009) in constructing and interpreting city identity for different audiences.

Our study invites further work on the dynamic of city identity and the role of various modes and sign systems. Further work could examine the interplay between city's architectural style and photography, both as historical records and iconic images that shape collective memory and offer identity cues (Sontag, 1977). Analysing speeches of cities' successive mayors may allow tracing continuity and disruption in values pursued and expressions given to the city through the multimodality and temporality of its built environment. Studying the re-allocation of semiotic tasks from professionals to inhabitants and visitors, enabled by technological advances (Bezemer & Kress, 2016), could shed light on how that changes the nature, modes and

affordances of the different sign systems and their interaction, and whether new or different meanings for the city are being created and shared.

In conclusion, we believe that city identity and the role of architecture and other sources of multimodality in its construction is a vibrant and important new area of research for students of organization. Research that employs a multimodal and temporal approach can highlight the continuity and mutability of different sign systems and their affordances on the initiative and under the influence of different institutional actors, as well as how they work in interaction, bringing novel insights into collective identities, meaning making and institutions in the context of cities.

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Table 1 CONSTRUCTING CITY IDENTITY THROUGH ARCHITECTURE

Sign System	Primary modes and their affordances	Primary institutional actors
Material	<p>Material order – e.g. landmarks and iconic buildings, public spaces and public art, layout</p> <ul style="list-style-type: none"> • offers potential for distinctive city identity • guides social interactions • institutionalizes and preserves the city's identity—its history, culture and key people--that enhances collective memory • defines walkability—a city of human scale and livability • enhances legibility (e.g., grids, boulevards) 	<ul style="list-style-type: none"> • Architects including landscape architects • City planners and personnel • Historical commissions and zoning officials
Visual	<p>Architectural styles of the city's built environment,</p> <ul style="list-style-type: none"> • Offers distinctiveness through a coherent style • reveal and construct identity by locating the various areas of the city in an historical time and place • enhance legibility: the ease with which parts of the city can be recognized and organized into a coherent pattern 	<ul style="list-style-type: none"> • Architects and urban planners that create discernible style • Critics that decode and explain style
Rhetorical	<p>Written and verbal text of who and what constitutes the city</p> <ul style="list-style-type: none"> • Facilitates meaning making • Emphasizes part as if the whole (synecdoche) • Elides continuity by highlighting parts (asyndeton) • Guides walkability and legibility 	<ul style="list-style-type: none"> • Architectural and cultural critics • Tourist guidebook writers • Mayors and city planners

Table 2

MICHELIN GUIDE COMPARISONS OF BARCELONA AND BOSTON

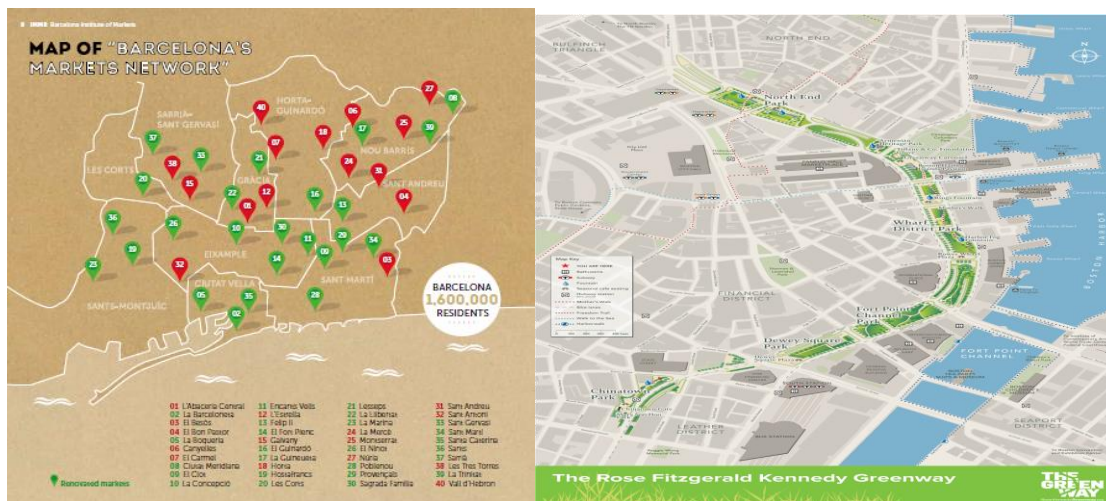
	BARCELONA			BOSTON		
Years	1983	1993	2005	1981/1982	1993	2004
Population	1,754,714	1,694,046	1,681,132	618,493	574,283	589,141
Area	38 square miles or 98 square km			89 square miles or 232 square km		
Geography	Port City defined by hills			Port City defined by hills		
City Rating	3	3	3	2	3	3
# of 1 star	14	25	34	12	13	21
# of 2 stars	6	11	19	15	17	19
# of 3 stars	0	1	3	6	5	6
Architecture Rated – Total	20	37	56	33	35	46
Average Building. Rating*	.800	.860	1.10	.968	.954	1.07
Park Areas	Park Güell (by Gaudí)			Common & Emerald Necklace (by Olmsted)		
Walking Area	Las Ramblas			Newbury St & Commonwealth Ave		
Key Areas/ Neighbor- hoods	<ul style="list-style-type: none"> • Gothic Quarter • Montjuïc • Tibidabo • Cuitadella 	<ul style="list-style-type: none"> • Gothic Quarter • Montjuïc • Carrer de Montcada • Cuitadella 	<ul style="list-style-type: none"> • Gothic Quarter • Montjuïc • Ciutat Universi- taria • Ribera • L'Eixample (Ensanche) • Seafront 	<ul style="list-style-type: none"> • Beacon Hill • Back Bay • Water-front • Government Centre 	<ul style="list-style-type: none"> • Beacon Hill • Back Bay • Water-front • Government Centre 	<ul style="list-style-type: none"> • Beacon Hill • Back Bay • Water-front • North End

Fig. 1 THE MATERIAL SIGN SYSTEM (VISUALIZED): PUBLIC SPACES IN BARCELONA AND BOSTON

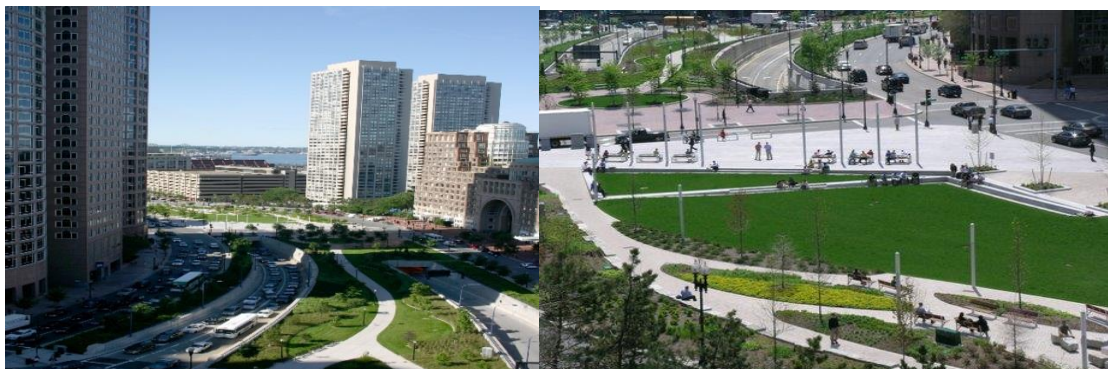
1.1 and 1.2 Barcelona's Parc de la Cuitadella and El mercado de Santa Caterina



1.3 and 1.4 Maps of Boston and Barcelona emphasizing markets and park areas, respectively



1.5 and 1.6 Boston's Emerald Necklace and Rose Kennedy Greenway



Source: <http://meet.barcelona.cat/en/> for Barcelona's images and <http://ajuntament.barcelona.cat/mercats/> for Barcelona's map; <http://commons.wikimedia.org> for Boston's images and map (see Appendix 1 for specific attributions, copyright and links)

Fig. 2 THE VISUAL SIGN SYSTEM: BARCELONA AND BOSTON NEIGHBORHOODS

2.1, 2.2, 2.3 and 2.4: Images of Barcelona's Ciutat Vella, Gràcia, L'Eixample and 22@ districts

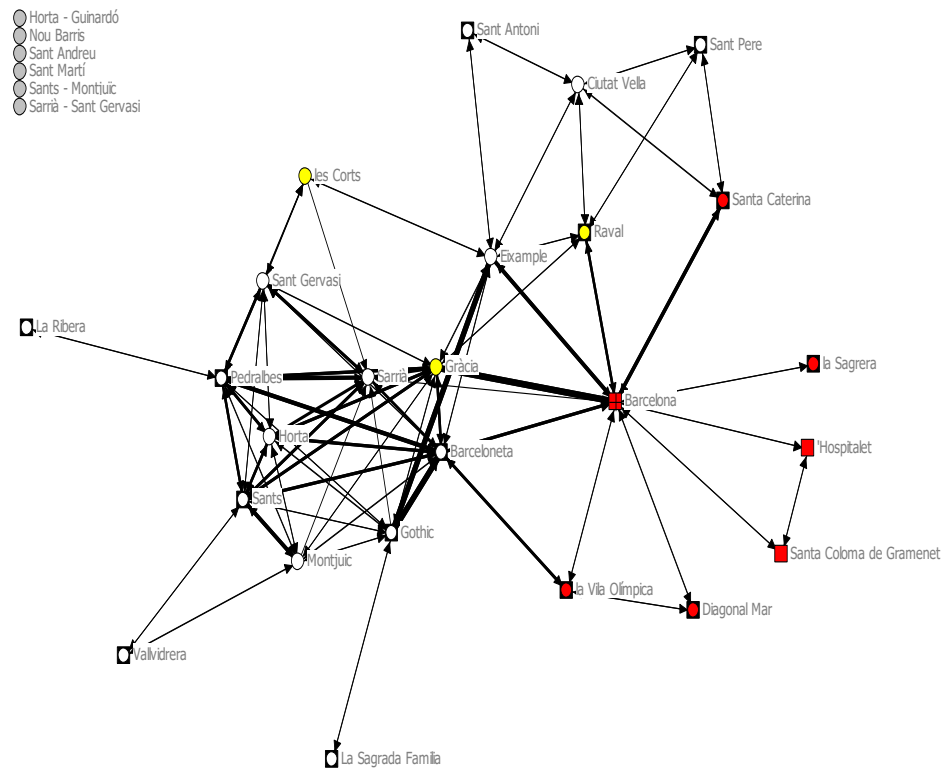


2.5, 2.6, 2.7 and 2.8: Images of Boston's Beacon Hill, Back Bay, Government Center, Hancock Tower



Source: <http://meet.barcelona.cat/> and <http://ajuntament.barcelona.cat/> for Barcelona's images and for Boston's images <http://commons.wikimedia.org> (see Appendix 1 for specific attributions, copyright and links)

**Fig. 3a THE RHETORICAL SIGN SYSTEM (VISUALIZED):
WHO BARCELONA IS ACCORDING TO MICHELIN AND MOIX**



Node Shapes

Circle= District

Circle in box= Neighborhood

Square = Adjacent city

Node Colors

Red= Dominated by Critic Llatzer Moix

White= Dominated by Michelin

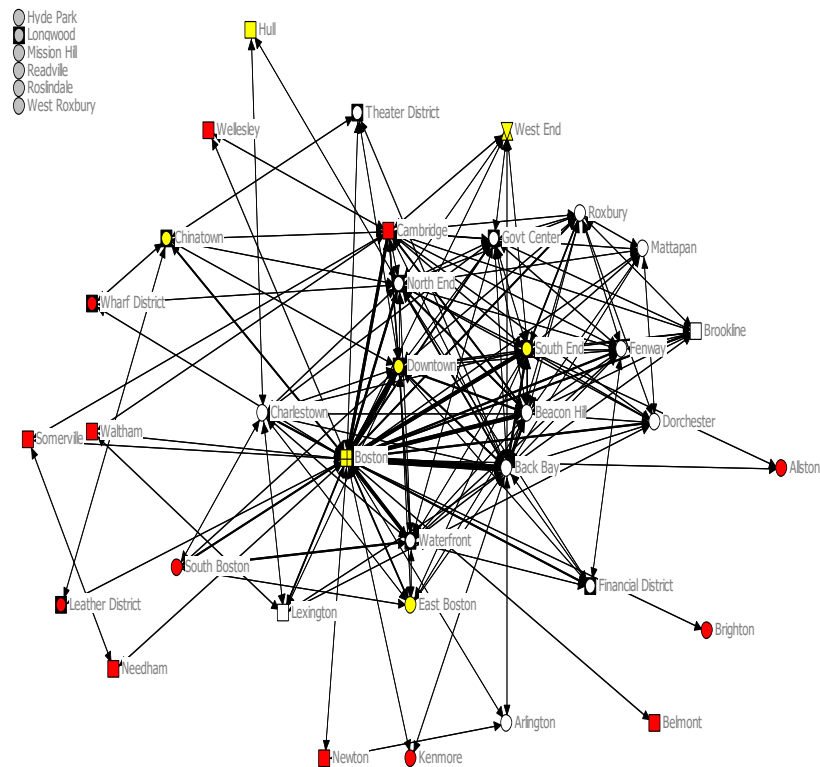
Yellow = shared space (40-60% between critic and guide book)

Gray = not mentioned but officially a district

Line size = tie strength

Density = . 2189

Fig. 3b THE RHETORICAL SIGN SYSTEM (VISUALIZED): WHO BOSTON IS ACCORDING TO MICHELIN AND CAMPBELL



Node Shapes

Circle= District

Circle in box= neighborhood

Square = Adjacent city

Line size = tie strength

Node Colors

Red= Dominated by Critic Robert Campbell

White= Dominated by Michelin

Yellow = shared conception (40-60% overlap between critic and guide)

Gray = not mentioned but officially a district

Density = .8622

Appendix 1 SPECIFIC ATTRIBUTIONS, COPYRIGHT AND LINKS

Images related to Barcelona (retrieved March 21, 2017)

1.1 Parc de la Ciutadella - Nature and beaches in Barcelona (Ciutadella park);

<http://meet.barcelona.cat/en/discover-barcelona/live-barcelona/nature-and-beaches>

1.2 Mercat de Santa Caterina (Santa Caterina market); <http://meet.barcelona.cat/en/discover-barcelona/districts/ciutat-vella/mercat-de-santa-caterina>

1.3 Map of Barcelona's market network;

http://ajuntament.barcelona.cat/mercats/sites/default/files/pub_mercats_CAT_def.pdf

2.1 El Gòtic (Gothic Quarter, Ciutat Vella); <http://meet.barcelona.cat/es/descubre-barcelona/distritos/ciutat-vella/gotic>

2.2 El districte de Gràcia (Gràcia); <http://ajuntament.barcelona.cat/gracia/ca/article/el-districte-de-gracia>

2.3 El Quadrat d'Or, La Barcelona modernista (The “Golden Square”, Modernist Barcelona, L'Eixample); <http://meet.barcelona.cat/ca/descobreix-barcelona/districtes/eixample/quadrat-dor>

2.4 El 22@ (Innovation district, Sant Martí); <http://meet.barcelona.cat/es/descubre-barcelona/distritos/sant-marti/22-arroba>

Images related to Boston (retrieved March 17, 2017)

1.4 Map of Rose Kennedy Greenway

http://www.rosekennedygreenway.org/files/2713/0084/1069/web_wayfinding.gif

1.5 From 470 Atlantic Ave. by Danielle Walquist

<http://www.flickr.com/photos/25195310@N02/2668040957/>

1.6 Wharf District Parks by gconservancy from USA

<http://www.flickr.com/photos/29284269@N04/2739438100/> Wharf District Parks

2.5 Beacon Hill by Ian Howard

https://commons.wikimedia.org/wiki/File:ISH_WC_Boston4.jpg

2.6 Back Bay by Ingfbruno File:1982-BOS-2.JPG

1.7 Government Center, Boston City Hill by Daniel Schwen

https://commons.wikimedia.org/wiki/File:Boston_city_hall.jpg

2.8 Hancock Tower (Trinity Church) by

https://commons.wikimedia.org/wiki/File:Trinity_Church,_Boston_3.jpg